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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/668,393	09/23/2003	Jon Godston	010398-9065-02	2524
7590 02/09/2006			EXAMINER	
Michael Best & Friedrich LLP 100 East Wisconsin Avenue Milwaukee, WI 53202-4108			ALIE, GHASSEM	
			ART UNIT	PAPER NUMBER
			3724	

DATE MAILED: 02/09/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/668,393

Applicant(s)

GODSTON ET AL.

Examiner

Ghassem Alie

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11/21/05.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 14-21 and 44-57 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 14-21 and 44-57 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 September 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character “519” has been used to designate both attachment points and a pivot point. See Fig. 12 and paragraph 81, line 7 and paragraph 90, line 9. In addition, reference character “517” has been used to designate both an upper cradle portion and an end cap. See Fig. 12 and paragraph 85, line 6 and paragraph 90, line 1.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all Obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negative by the manner in which the invention was made.

3. Claims 14-17, 21, 44-46, 48-50, and 54-57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sopko (4,993,291) in view of Groswith, III et al. (5,163,350), hereinafter Groswith, or Renfrew (41,861). Regarding claims 14 and 47, Sopko teaches a

punch including a linkage mechanism 15, 163, 169 and a punch element 27 which is associated with a drive surface 171 defined by a first member 169 of the linkage wherein, upon actuation of the linkage, an arcuate motion of the drive surface drives the punch element 27 to pinch a hole in a workpiece. It should be noted that the first member 169 of the linkage has a cylindrical shaft 171 that pushes the punch 27 downward by an arcuate motion as shown in Fig. 5 and 6 in Spoko. Sopke also teaches the drive surface at least partially defined by a first member 169 of the linkage.

Sopko does not teach that the linkage is a four bar linkage. However, the use of a four bar linkage for actuating at least a punch is well known in the art such as taught by Groswith or Renfrew. Groswith teaches a punch 12 for punching a workpiece including a four bar linkage 32 having at least four members 33-36. See Figs. 1-23 and col. 5, lines 16-668 and col. 6, lines 1-68 and col. 11, lines 1-32 in Groswith. Renfrew also teaches a punch for punching a workpiece including a four bar linkage having at least four members AHLI. Renfrew also teaches that at least one punch E operably associated with a first link member I of the linkage. See Figs. 1-3 and page 1 in Renfrew.

It would have been obvious to a person of ordinary skill in the art to provide Sopko's punch actuating mechanism with the four bar linkage, as taught by Groswith or Renfrew, since Sopko's punch actuating mechanism functionally is equivalent to Groswith's four bar linkage or Renfrew's four bar linkage. In addition, it would have been obvious to a person of ordinary skill in the art to replace Sopko's punch actuating mechanism with the four bar linkage, as taught by Groswith or Renfrew, since the four bar linkage reduces the force

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needed to actuate a punch and produces a heavy leverage for forcing the punch into the workpiece.

Regarding claims 15 and 48, Sopko, as modified above, teaches everything noted above including that upon actuation of the linkage, the first member 169 of the linkage abuts the at least one punch element 27. See Figs. 1-6 in Sopko.

Regarding claims 16 and 49, Sopko, as modified by above, teaches everything noted above including a second member of the linkage is configured to support the remaining member of the linkage and the at least one punch element 35, 50, 85. It should be noted that any of member of the linkage 33-36 can be considered as a second member that supports the remaining members and the punch 35, 50, 85 by a punch plate that is connected to the linkage 32. See Figs. 7-23 in Groswith.

Regarding claims 17, 21, 50, and 54, Sopko, as modified by above, teaches everything noted above including that the first member 169 of the linkage operates the at least one punch element 27 by imparting a camming action upon the at least one punch element. Sopko, as modified above, also teaches that the linkage 169 is actuated upon a motion of a third member of the linkage and the first and third members are pivotally associated. See Figs. 1-6 in Sopko and Figs. 1-3 in Groswith or Renfrew.

Regarding claims 44-46 and 55-57, Sopko, as modified above, teaches everything noted above including that the first member 169 of the linkage includes a drive member 171 coupled to the first member 169 and the drive member at least partially defining the drive surface. Sopko, as modified above, also teaches that the drive member 171 is substantially a cylindrical bar and the drive surface is substantially arcuate. See Figs. 1-6 in Sopko.

4. Claims 14-21 and 44-57 are rejected under 35 U.S.C. 103(a) as being unpatentable over Otsuka et al. (3,921,487), hereinafter Otsuka in view of Groswith, III et al. (5,163,350), hereinafter Groswith, or Renfrew (41,861) and in further view of Sopko (4,993,291).

Regarding claims 14 and 47, Otsuka teaches a punch for punching at least one sheet of paper including a support portion 8, 12, 16 which includes an arcuate portion. The perforated plate, the guide member 12, and the guide pieces 16 define the support portion. The upper section of the guide member 12 includes an arcuate portion. Otsuka also teaches at least a punch mechanism 7, 24 operably associated with the support portion 8, 12, and 16 to punch the sheet of paper upon actuation of the punch 7. See Figs. 1-4 in Otsuka.

Otsuka does not teach a four bar linkage as an actuating device which includes at least four members. Otsuka also does not teach that at least one punch element operably associated with a drive surface defined by the first member of the linkage wherein, upon actuation of the linkage, an arcuate motion of the drive surface drives the punch element to punch a hole in the workpiece.

However, the use of a four bar linkage for actuating at least a punch is well known in the art such as taught by Groswith or Renfrew. Groswith teaches a punch 12 for punching a workpiece including a four bar linkage 32 having at least four members 33-36. Groswith also teaches that at least one punch 35, 50, 85 operably associated with a first link member 33. See Figs. 1-23 and col. 5, lines 16-668 and col. 6, lines 1-68 and col. 11, lines 1-32 in Groswith. Renfrew also teaches a punch for punching a workpiece including a four bar linkage having at least four members A-H-L-I. Renfrew also teaches that at least one punch E

operably associated with a first link member I of the linkage. See Figs. 1-3 and page 1 in Renfrew.

It would have been obvious to a person of ordinary skill in the art to replace Otsuka's punch actuating mechanism with the four bar linkage, as taught by Groswith or Renfrew, since Otsuka's punch actuating mechanism functionally is equivalent to Groswith's four bar linkage or Renfrew's four bar. In addition, it would have been obvious to a person of ordinary skill in the art to replace Otsuka's punch actuating mechanism with the four bar linkage, as taught by Groswith or Renfrew, since the four bar linkage reduces the force needed to actuate a punch and produces a heavy leverage for forcing the punch into the workpiece.

Otsuka, as modified by Groswith or Renfrew, does not explicitly teach that the punch element is associated with a drive surface defined by a first member of the linkage wherein, upon actuation of the linkage, an arcuate motion of the drive surface drives the punch element to pinch a hole in the workpiece.

However, Sopko teaches a punch including a linkage mechanism 15, 163, 169 and a punch element 27 which is associated with a drive surface 171 defined by a first member 169 of the linkage wherein, upon actuation of the linkage, an arcuate motion of the drive surface drives the punch element 27 to pinch a hole in a workpiece. It should be noted that the first member 169 of the linkage has a cylindrical shaft 171 that pushes the punch 27 downward by an arcuate motion as shown in Fig. 5 and 6 in Spoko.

It would have been obvious to a person of ordinary skill in the art to replace the drive member of Otsuka's punch actuating mechanism, as modified by Groswith or Renfrew, with

the drive member of the first member of the linkage, as taught by Spoko, in order to facilitate the replacement of the punch element and actuate the punch in an alternative way that Produce the same result which is actuation of the punch.

Regarding claims 15 and 48, Otsuka, as modified above, teaches everything noted above including that upon actuation of the linkage, the first member 169 of the linkage abuts the at least one punch element 27. See Figs.1-6 in Sopko.

Regarding claims 16 and 49, Otsuka, as modified by above, teaches everything noted above including a second member of the linkage is configured to support the remaining member of the linkage and the at least one punch element 35, 50, 85. It should be noted that any of member of the linkage 33-36 can be considered as a second member that supports the remaining members and the punch 35, 50, 85 by a punch plate that is connected to the linkage 32. See Figs. 7-23 in Groswith.

Regarding claims 17, 21, 50, and 54, Otsuka, as modified by above, teaches everything noted above including that the first member 169 of the linkage operates the at least one punch element 27 by imparting a camming action upon the at least one punch element. Otsuka, as modified above, also teaches that the linkage 169 is actuated upon a motion of a third member of the linkage and the first and third members are pivotally associated. See Figs. 1-6 in Spoko and Figs. 1-3 in Groswith or Renfrew.

Regarding claims 18 and 51, Otsuka, as modified by above, teaches everything noted above including that one of the at least four members includes a support member 16 to accommodate and locate the workpiece in an upward punching position. See Fig. 1 in Otsuka and Figs. 7-23 in Groswith.

Regarding claims 19, 20, 52, and 53, Otsuka teaches everything noted above including that the support member 16 is oriented at an angle from a vertical. It appears that the angle of the support member 16 with respect to a vertical is 45 degrees from the vertical line. See Fig. 2 in Otsuka. Otsuka, as modified above, does not expressly teach that the angle is less than 40 degrees or less than 25 degrees. However, it would have been to orient the support member at an angle from a vertical, which is less than 45 degrees or 25 degrees, since the specific angle of the support member with respect to a vertical, is not critical to the function of the support member and it is a matter of a design choice to provide the support member with a specific angle with respect to a vertical. In addition, applicant does not teach that less than 45 degrees or less than 25 degrees angle of the support member with respect to a vertical is critical to the instant invention. Furthermore, the use of support members that are oriented upright to an angle less than 25 degrees or less than 45 degrees to a vertical is well known in the art such as taught by Scharer (4, 645,399), Hu (5,575,188), or Becker (2,421,864). Becker's support portion is even adjustable relative to the vertical line which is perpendicular to the base of a punching device.

Regarding claims 44-46 and 55-57, Otsuka, as modified above, teaches everything noted above including that the first member 169 of the linkage includes a drive member 171 coupled to the first member 169 and the drive member at least partially defining the drive surface. Otsuka, as modified above, also teaches that the drive member 171 is substantially a cylindrical bar and the drive surface is substantially arcuate. See Figs. 1-6 in Sopko.

Response to Amendment

5. Applicant's arguments with respect to claims 14 and 47 have been considered but are

moot in view of the new ground(s) of rejection.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Brownlee et al. (5,174,794), Exline (2,962,178), Wich (4,019,415), Richards, SR (3,181,408), and Loehr et al. (1,615,020) teach a punch having a four bar linkage.

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ghassem Alie whose telephone number is (571) 272-4501. The examiner can normally be reached on Mon-Fri 8:30 am - 5:00 pm.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Allan Shoap can be reached on (571) 272-4514. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, SEE <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (too-free).

GA/ga

January 30, 2006


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